



## **The Passaic River Study Area**

**United States Environmental Protection Agency, Region II**

**Status of PRP Search and Issuance of Notice Letters**

**Prepared by: Andrews & Kurth L.L.P.  
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**For Chemical Land Holdings, Inc., on behalf of  
Occidental Chemical Corporation (successor to  
Diamond Shamrock Chemicals Company, f/k/a  
Diamond Alkali Company)**

**February, 2001**

Tab	PRP Name	Document(s): Summary
5	Sequa Corporation	
A		July 26, 2000 New Jersey Department of the Treasury, Division of Revenue Status Report for Sequa Corporation indicating Sun Chemical as previous name.
B		Excerpt from 1978 "City of Newark Feasibility Study - Pollution Abatement Program." Documents malfunctioning regulator and CSO which allowed both dry and wet weather overflows from the Roanoke Avenue CSO.
C		Graphical depiction of Sun Chemical discharge mechanism. Illustrates Sun Chemical discharge route via Roanoke Ave. CSO outfall; documents "highly polluting" discharges to river.
		(See also the Sun Chemical information located in: The Passaic River Study Area, United States Environmental Protection Agency, Region II, Status of PRP Search and Issuance Notice Letters, February, 2001.)

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## EVIDENCE SUMMARY SHEET

(By shipment/disposal or collective group(s) of shipments/disposals)

**Current Name, Mailing Address, and Telephone:**

Sequa Corporation  
200 Park Avenue  
New York, NY 10166  
[Telephone: 212-986-5500]

**References:**

NJ Dep't. of Treasury records;  
shows prior corporate name was Sun  
Chemical Corporation.

**Facility location:** 185 Foundry Street, Newark. See attached Site  
Location Map showing facility location in proximity to the Passaic River.

**Date or time period of shipment(s) or disposal(s):**

Direct/Indirect Discharges: 1967-1986 -- Plant waste effluent  
through the Roanoke Avenue CSO, through the permanently  
malfunctioning Avenue P regulator, to the Passaic River (same  
rationale as for EPA's having issued PRP Notice letters prior to  
DuPont, Reilly, and Ashland).

PVSC documents regarding Avenue  
P regulator; PVSC Annual Reports  
1972-1974\*.

**Transporter:** City of Newark and/or PVSC -- to the extent of  
contaminated discharges carried through Roanoke Avenue line,  
through Avenue P regulator directly to the Passaic River.

PVSC documents.

**Volume or quantity:** Not susceptible to precise calculation due to  
irregular and intermittent nature of discharges. However, the  
same types of substances known to be at the Subject's facility  
have been detected at significant levels in Passaic River  
sediments near the Subject's facility.

Above references; Sediment data  
previously submitted to USEPA.\*

**Name of Hazardous Substance(s) [and RCRA waste codes, if  
applicable] (See 40 CFR Sec. 302.4):**

PCBs, Class III dioxin precursor [1,2,4 trichlorobenzene],  
Chromium, Copper, Lead, Nickel, Zinc, Cyanide, Phenols  
[U188], Benzene [U109], Bis (2-ethylhexyl) phthalate [U028],  
2-Butanone [U159], Di-n-butylphthalate [U069], Methylene  
Chloride [U080], Napthalene [U165], Toluene [U220], Xylenes  
[U239].

ECRA sampling (post 1986); PVSC  
1980 Sewer Connection Application;  
1976 Waste Effluent Survey.\*

**Substances like the generator's that are found in the Passaic River:**

Many of the above were detected at significant levels in  
sediments in the vicinity of the Subject's facility. Analyses were  
not done for some.

Sediment data previously submitted  
to USEPA.\*

**Name, Mailing Address and Telephone of Registered Agent:**

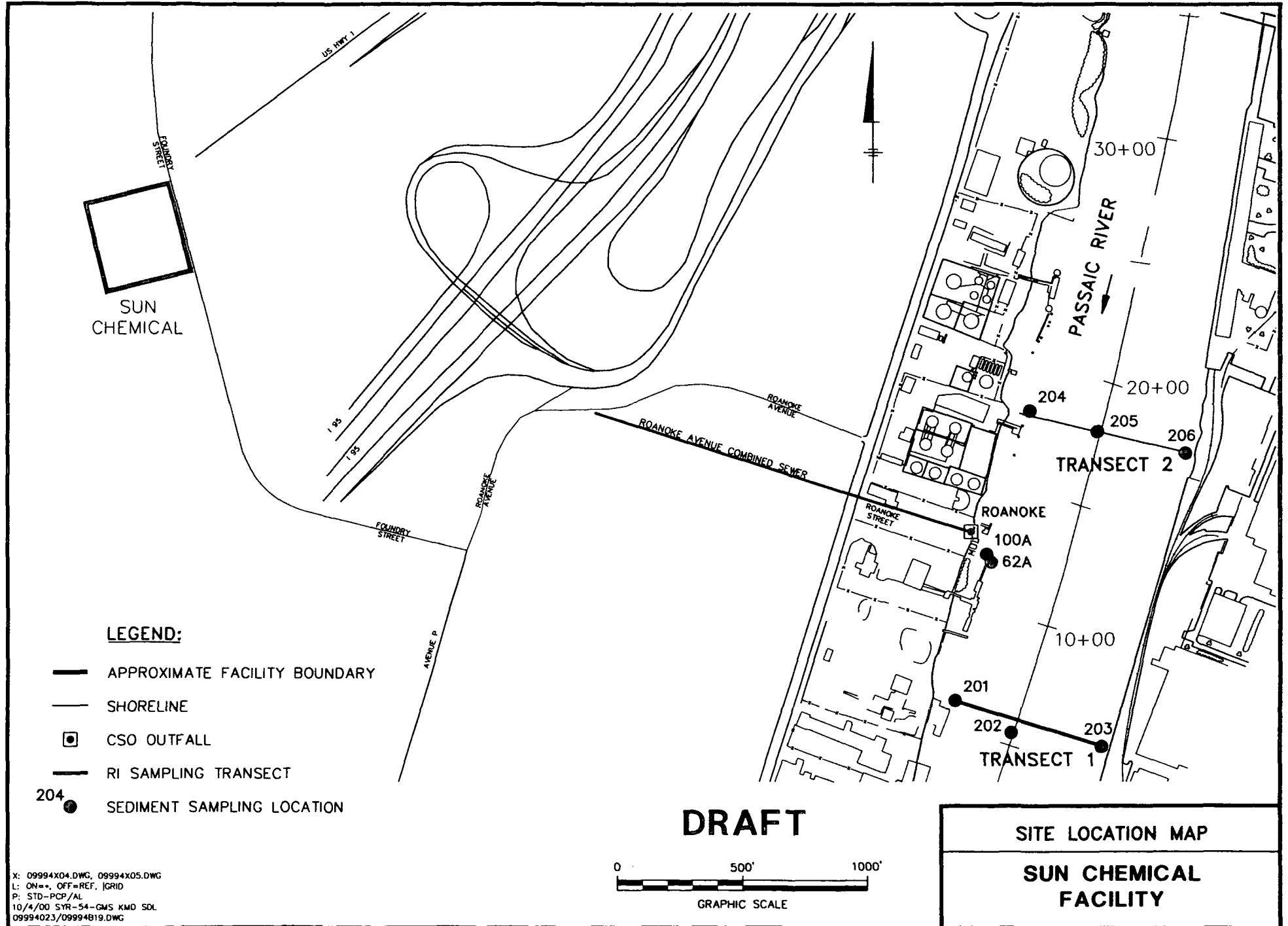
Delaware:  
CT Corporation System  
209 Orange Street  
Wilmington, DE 19801

New Jersey:  
CT Corporation System  
820 Bear Tavern Road  
West Trenton, NJ 08628

NJ Dep't. of Treasury records.

\* See "Sun Chemical Corporation  
(Sun 2)" reference materials section.

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# SEQUA CORPORATION

## TAB A

July 26, 2000 New Jersey Department of the Treasury,  
Division of Revenue Status Report for Sequa  
Corporation indicating Sun Chemical as previous  
name.

## New Jersey Department of the Treasury, Division of Revenue

## Status Report For:

Business Name	Business ID Number	Transaction Number, Seq	Report Date
SEQUA CORPORATION	8680801000	111040 : 1	7/26/2000

<b>Business Type:</b>	FOREIGN PROFIT CORPORATION
<b>Status:</b>	ACTIVE

<b>Filing Date:</b>	05/07/1929	<b>Home Jurisdiction:</b>	DE
<b>Status Change Date (If dissolved, withdrawn or canceled):</b>		<b>Stock Amount:</b>	0
<b>DOR Suspension Start Date:</b>		<b>DOR Suspension End Date:</b>	
<b>Tax Suspension Start Date:</b>		<b>Tax Suspension End Date:</b>	
<b>Annual Report Month:</b>	4	<b>Last Annual Report Filed:</b>	05/18/1999
		<b>For Last AR Paid Year:</b>	1999

<b>Incorporator:</b>	
<b>Agent:</b>	THE CORPORATION TRUST COMPANY
<b>Agent Address:</b>	820 BEAR TAVERN ROAD TRENTON, NJ 08628 0000
<b>Office Address Status:</b>	Deliverable

932690008



<b>Main Business Address:</b>	200 PARK AVENUE NEW YORK, NY 10166
<b>Principal Business Address:</b>	3 UNIVERSITY PLAZA HACKENSACK, NJ 07601

**Associated Names:**

Name	Type Description
SUN CHEMICAL CORPORATION	PREVIOUS NAME

<a href="#">Next Status Report</a>	<a href="#">Order Additional Business Information</a>
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<a href="#">Session Account Status</a>	<a href="#">Transaction Detail Report</a>
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<a href="#">Home Page</a>	<a href="#">Done</a>
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**B**

**932690010**

## SEQUA CORPORATION

### TAB B

Excerpt from 1978 "City of Newark Feasibility Study - Pollution Abatement Program." Documents malfunctioning regulator and CSO which allowed both dry and wet weather overflows from the Roanoke Avenue CSO.

# POLLUTION ABATEMENT PROGRAM



September, 1977

RECEIVED JANUARY, 1977

### I. Introduction

Four significant sources are being discharged into the lower Passaic River from four storm sewers by the City of Newark. These are the combined combined discharges from the wet weather overflow of the Newark system combined sewer, and the Blanchard Street and the Lockwood Street storm sewers, and intermittent discharges from the Brown Street sewer. During dry weather, no flow should be discharged from the Newark system combined sewer, and only non-polluted water from the Blanchard Street, Lockwood Street, and Brown Street storm sewers, however, high levels of pollutants have been detected in the dry weather discharges at all four locations. The following ranges of pollutant concentrations and pH have been reported by the Passaic Valley Sewerage Commissioners (PVSC) during the last two years.

#### Pollutant Concentration (ppm)

<u>Location</u>	<u>TSS</u>	<u>COD</u>	<u>BOD</u>	<u>pH</u>
Roanoke Avenue	5-1428	116-15600	102-6300	2.0-7.3
Blanchard Street	5-1070	51-2815	7-420	1.9-8.2
Lockwood Street	16-3148	119-3408	8-840	3.3-9.2
Brown Street	7-93	42-352	16-135	6.2-9.8

Water from the Passaic River may enter all four sewers with the incoming tide and dilute the pollutant concentration. The pollutants may also be carried upstream of their entering points. Polluted flow from the sewer increases in rate with the falling tide. The highest

pollutant concentration and flow rates can be expected at low tide.

results of these samples are included in Appendix A.

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*Journal of Management Education* 36(7) 809-824

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1. The following information is being provided to you for your information only. It is not intended to be used for any other purpose.

4. The following information is provided for the year ended 31 March 2014:

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

1. The first step is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

• 1941 - 1942 - 1943 - 1944 - 1945 - 1946 - 1947 - 1948 - 1949 - 1950 - 1951 - 1952 - 1953 - 1954 - 1955 - 1956 - 1957 - 1958 - 1959 - 1960 - 1961 - 1962 - 1963 - 1964 - 1965 - 1966 - 1967 - 1968 - 1969 - 1970 - 1971 - 1972 - 1973 - 1974 - 1975 - 1976 - 1977 - 1978 - 1979 - 1980 - 1981 - 1982 - 1983 - 1984 - 1985 - 1986 - 1987 - 1988 - 1989 - 1990 - 1991 - 1992 - 1993 - 1994 - 1995 - 1996 - 1997 - 1998 - 1999 - 2000 - 2001 - 2002 - 2003 - 2004 - 2005 - 2006 - 2007 - 2008 - 2009 - 2010 - 2011 - 2012 - 2013 - 2014 - 2015 - 2016 - 2017 - 2018 - 2019 - 2020 - 2021 - 2022 - 2023 - 2024 - 2025 - 2026 - 2027 - 2028 - 2029 - 2030 - 2031 - 2032 - 2033 - 2034 - 2035 - 2036 - 2037 - 2038 - 2039 - 2040 - 2041 - 2042 - 2043 - 2044 - 2045 - 2046 - 2047 - 2048 - 2049 - 2050 - 2051 - 2052 - 2053 - 2054 - 2055 - 2056 - 2057 - 2058 - 2059 - 2060 - 2061 - 2062 - 2063 - 2064 - 2065 - 2066 - 2067 - 2068 - 2069 - 2070 - 2071 - 2072 - 2073 - 2074 - 2075 - 2076 - 2077 - 2078 - 2079 - 2080 - 2081 - 2082 - 2083 - 2084 - 2085 - 2086 - 2087 - 2088 - 2089 - 2090 - 2091 - 2092 - 2093 - 2094 - 2095 - 2096 - 2097 - 2098 - 2099 - 2100 - 2101 - 2102 - 2103 - 2104 - 2105 - 2106 - 2107 - 2108 - 2109 - 2110 - 2111 - 2112 - 2113 - 2114 - 2115 - 2116 - 2117 - 2118 - 2119 - 2120 - 2121 - 2122 - 2123 - 2124 - 2125 - 2126 - 2127 - 2128 - 2129 - 2130 - 2131 - 2132 - 2133 - 2134 - 2135 - 2136 - 2137 - 2138 - 2139 - 2140 - 2141 - 2142 - 2143 - 2144 - 2145 - 2146 - 2147 - 2148 - 2149 - 2150 - 2151 - 2152 - 2153 - 2154 - 2155 - 2156 - 2157 - 2158 - 2159 - 2160 - 2161 - 2162 - 2163 - 2164 - 2165 - 2166 - 2167 - 2168 - 2169 - 2170 - 2171 - 2172 - 2173 - 2174 - 2175 - 2176 - 2177 - 2178 - 2179 - 2180 - 2181 - 2182 - 2183 - 2184 - 2185 - 2186 - 2187 - 2188 - 2189 - 2190 - 2191 - 2192 - 2193 - 2194 - 2195 - 2196 - 2197 - 2198 - 2199 - 2200 - 2201 - 2202 - 2203 - 2204 - 2205 - 2206 - 2207 - 2208 - 2209 - 2210 - 2211 - 2212 - 2213 - 2214 - 2215 - 2216 - 2217 - 2218 - 2219 - 2220 - 2221 - 2222 - 2223 - 2224 - 2225 - 2226 - 2227 - 2228 - 2229 - 2230 - 2231 - 2232 - 2233 - 2234 - 2235 - 2236 - 2237 - 2238 - 2239 - 2240 - 2241 - 2242 - 2243 - 2244 - 2245 - 2246 - 2247 - 2248 - 2249 - 2250 - 2251 - 2252 - 2253 - 2254 - 2255 - 2256 - 2257 - 2258 - 2259 - 2260 - 2261 - 2262 - 2263 - 2264 - 2265 - 2266 - 2267 - 2268 - 2269 - 2270 - 2271 - 2272 - 2273 - 2274 - 2275 - 2276 - 2277 - 2278 - 2279 - 2280 - 2281 - 2282 - 2283 - 2284 - 2285 - 2286 - 2287 - 2288 - 2289 - 2290 - 2291 - 2292 - 2293 - 2294 - 2295 - 2296 - 2297 - 2298 - 2299 - 2300 - 2301 - 2302 - 2303 - 2304 - 2305 - 2306 - 2307 - 2308 - 2309 - 2310 - 2311 - 2312 - 231

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1. The first group of respondents (10%) was composed of individuals who had been involved in a sexual assault in the past 12 months. This group was further divided into two subgroups: those who had been the victim of a sexual assault (5%) and those who had been the perpetrator of a sexual assault (5%).

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

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1. *Journal of the American Medical Association*, 1997; 278: 1039-1044.

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

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...and the fact that the ...

1. *Journal of Management Studies*, 1997, 34, 1, 1-14.

...the fact that the *Journal of the American Medical Association* is the largest medical journal in the world, and that it is the only one that is published by a medical association.

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED DATE 07-08-2009 BY 60322 UCBAW

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...and the fact that the *Journal* is a journal of the American Psychological Association, the largest and most influential organization in the field of psychology, adds to the impact of the *Journal* on the field.

• **Prevalence:** The proportion of the population that has a disease at a specific point in time.

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...and the fact that the ...

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THE UNIVERSITY OF CHICAGO PRESS

1. The first step is to identify the problem or goal. This involves understanding the current situation, identifying the problem, and setting a clear goal.

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1601 UV-Visible Spectrophotometer.

... ..

\_\_\_\_\_

... the fact that the ... ..

Method: Look at the two data sets and at the three graphs.

[illegible]

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CONFIDENTIAL

### 3. Physical Inspection Findings

#### (1) Avenue "P" Regulator and Roanoke Outfall Sewer

The Avenue "P" regulator is not functional. About one foot of dry, granular sediment blocks the regulator and prevents flow between the diversion chamber and the Roanoke Avenue dry weather sewer. As a result, all flow in the Roanoke Avenue dry weather sewer enters the Potomac River through the Roanoke Avenue outfall. There is no visible evidence of chemical attack or deterioration of the concrete regulator structure. The regulator is not functional and is not functional. A wooden overflow weir, provided in the diversion chamber, is intact. This weir does not cause the upstream pipe to surcharge above the crown in dry weather. It does reduce upstream flow velocity and causes sedimentation. About 0.5 feet of primarily granular sediment was found in the combined sewer above the regulator. This material accumulates in dry weather and the lighter float floor, probably including most organic pollutants, may be flushed toward the Potomac River during relatively small rainfall events. Tests of wet weather flows in other areas indicate the flushing of such solids is accompanied by a large increase in BOD. High tides cause backup, reduce velocities, and cause sediment accumulation in the Roanoke Avenue outfall during dry weather. Some of this material may be carried away by the flow at low tide and some is scoured out by wet weather flows. About 0.2 feet of primarily granular sediment was found in the outfall sewer downstream of the Avenue "P" regulator. The size of this sewer changes to 60-inch at a manhole on the westerly side of Doremus Avenue. Mannants of the brick dam, used to divert flow into the Roanoke Avenue regulator, were observed in this manhole. There are two tide gate chambers in the 60-inch outfall. Both tide gates can swing open but neither can close completely because of sediment. No deterioration of the concrete was visible in

the tide gate chambers. A lump of bituminous material is partially blocking the discharge of the 60-inch outfall.

(2) Roanoke Avenue Sanitary Sewer

The 24-inch Roanoke Avenue sanitary sewer does not receive any flow at its upstream end because of the previously described blockage in the Avenue "P" regulator gate chamber. The manhole in the 24-inch sanitary sewer immediately downstream of the regulator contains over two feet of dry sediment. The sewer receives flow from the Pitt Consol Chemical Company downstream of that manhole. About 0.5 feet of a black, tar-like sediment was found in the sewer downstream of the Pitt Consol connections. The same black material was observed on the ground surface at the Pitt Consol plant. This material was not evident upstream of the Avenue "P" regulator or in the Roanoke Avenue outfall. Its source is evidently Pitt Consol. Sampling and analysis done jointly by the FVSC laboratory and Pitt Consol also detected chemicals used at the plant in the Roanoke Avenue outfall. However, no connections from Pitt Consol were found in the outfall. Spillage appears to have contaminated the groundwater and some appears to be leaking into the outfall. Groundwater pollution may also be leaking directly into Newark Bay. Groundwater pollution was not investigated since it was outside the scope of this study.

(3) Doremus Avenue Interceptor

The Doremus Avenue interceptor receives flow from the Roanoke Avenue sanitary sewer. Severe sedimentation was noted in this line. The first four lengths of 24-inch pipe upstream from Wilson Avenue (D-1 to D-5) were constructed on a reverse grade and the fifth length (D-5 to D-6) laid flat. The invert at Wilson Avenue is 1.2 feet higher than the low point where the minimum flow depth is greater than half pipe. Further upstream the sewer size changes from 24-inch to 22-inch and then to 20-inch in diameter. Sediment depth in the





## SEQUA CORPORATION

### TAB C

Graphical depiction of Sun Chemical discharge mechanism. Illustrates Sun Chemical discharge route via Roanoke Ave. CSO outfall; documents “highly polluting” discharge to river.

# **PASSAIC RIVER STUDY AREA**

Sun Chemical Corp.  
Arkansas Chemical Foundry Street Comple  
185 Foundry Street  
Newark, New Jersey

## **KEY TO MAP:**

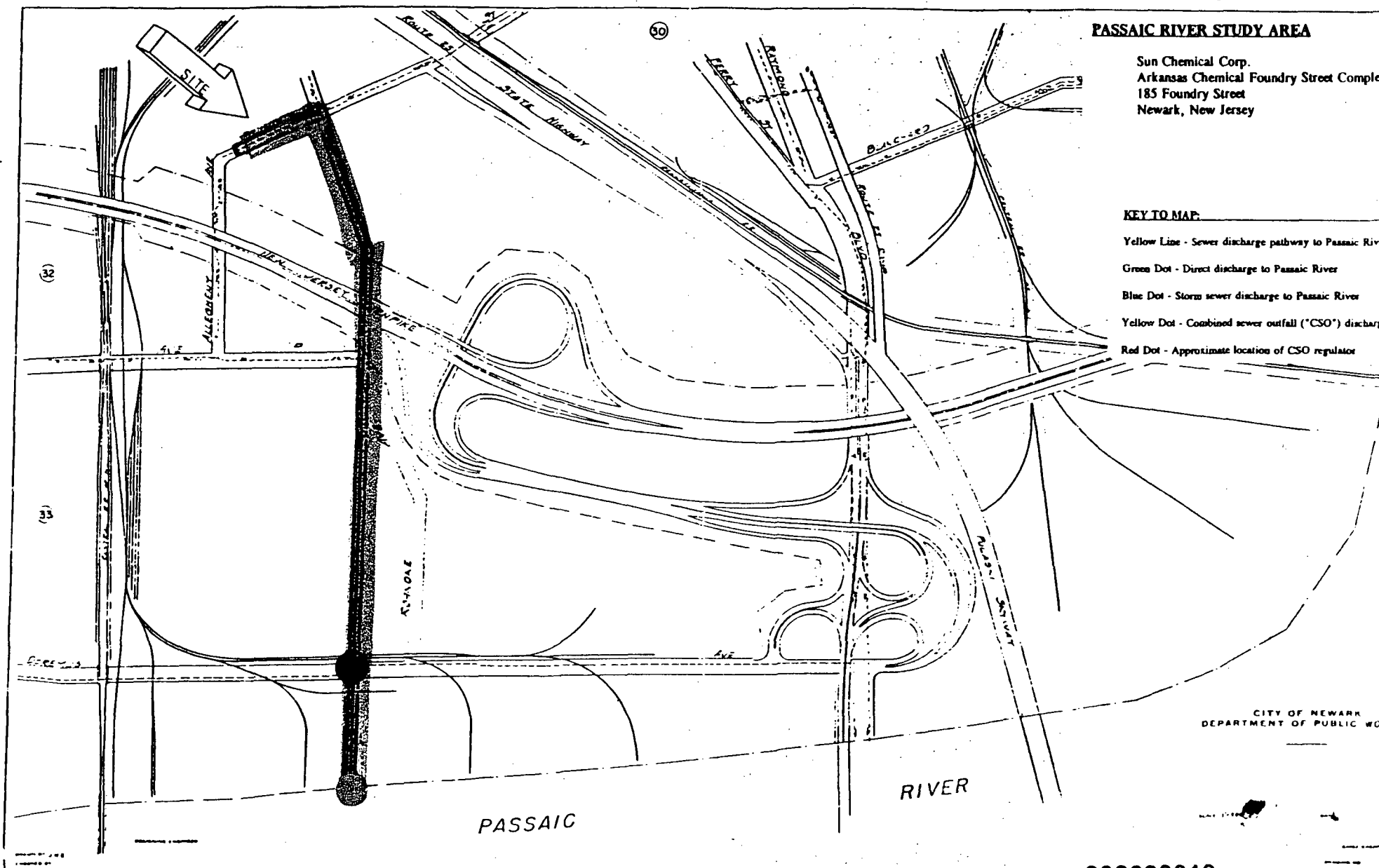
Yellow Line - Sewer discharge pathway to Passaic River

Green Dot - Direct discharge to Passaic River

Blue Dot - Storm sewer discharge to Passaic River

Yellow Dot - Combined sewer outfall ("CSO") discharge

Red Dot - Approximate location of CSO regulator



CITY OF NEWARK  
DEPARTMENT OF PUBLIC WORKS

932690019

**10/23/78 Letter from PVSC re discharge from the Sun Chemical facility**

- Documents "highly polluting" discharge from Sun Chemical to the Passaic River

DAL02:71890.1

**932690020**

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1127 SHAWMAN

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**EXECUTIVE DIRECTOR**

ROGER D. RICCI  
- CHIEF ENGINEER

CHARLES C. CARELLA  
CHIEF COUNSEL.

~~W~~ NORMAN I DARNSTATTER  
CLERK

Mr. ~~Peter~~ Lynch, Manager  
Passaic - Hackensack Region  
100 Raymond Blvd.  
Newark, New Jersey 07102

On Friday, October 13, you called me at 3:50 P.M. to inform me of a complaint of [redacted] regarding pollution from the Turnpike Bridge and Doramus Avenue. I investigated this pollution personally and also alerted Mr. Frank Cupo, Superintendent of River Inspection, and found that whatever had caused this pollution had ceased. [redacted]

I had called you on Monday, October 16, to give you a report of our findings and also told you that we would continue our investigation. ~~On Tuesday, October 17, our river inspectors~~

1. Chemical Company, Inc., Passaic, N. J. This company produces a deep red organic pigment which is not water soluble but dispersible. Upon standing in a jar, it rises and floats on top of the water. This would account for its being visible on the surface of the Passaic River.

[REDACTED]

[REDACTED] The sample was in the laboratory

[REDACTED]

Mr. Peter Lynch

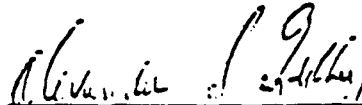
-2-

October 23, 1978

Arkansas Co. Inc. is a chemical company next door to Sun Chemical and uses the same concrete channel for its wastes. A sample taken from their line was also polluting in COD, TOC and had a pH 3.4. This sample was an opaque white.

Both of these companies were advised that they were in violation not only of polluting the Passaic River, but that their low pH discharge was illegal even in a sanitary sewer. At Sun Chemical we spoke with Ralph Jaffe, Production Chemist, and at Arkansas Company we spoke with Chief Chemist, Herman Weiland.

Very truly yours,



Alexander S. Goldberg

ASG:dhb

cc: ☒ T. Perrapato  
R. Ricci  
E. Moller  
F. Cupo

932690022

**Sun Chemical Effluent Neutralization and pH Control Report, 06/04/79**

- Documents that all of Sun Chemical's production effluent was discharged to the PVSC system

DAL02:71890.1

932690023

## SUN CHEMICAL CORPORATION

TO: R. Marino

FROM: D. Ganguly *dl*

LOCATION: Rosebank

LOCATION: Rosebank

ANSWERING

DATE: June 4, 1979

SUBJECT: Effluent Neutralization & PH Control System - Newark

116-962

[REDACTED] will be installed in two neutralization tanks. Five separate pipelines will be used to direct the effluents to the neutralization tanks. The plant effluent flow rate averages at 60 gpm with peaks at the range 80-90 gpm.

Two neutralization tanks will be installed in series (as a cascade system) with one agitator on each tank. The instrumentation will be handled directly with two independent control loops. The first loop will have Immersion pH electrodes situated on the treatment tank so that when a highly acidic situation is sensed through the pH probes, the reagent (alkaline solution: caustic soda) can be added in the first tank through caustic valve. The second loop will have an Immersion pH electrode assembly mounted on outlet of tank #1. This Immersion assembly will check the first loop to make sure the acid was neutralized and if not, will operate a caustic valve approximately half the size of the first valve to add caustic to the second tank.

[REDACTED] will be at the outlet of tank #2. [REDACTED] will be at the outlet of tank #2. [REDACTED] will be at the outlet of tank #2.

2-pen pH recorder will record the pH of the plant effluent before and after neutralization respectively.

cc: R. Munoz  
R. Nanes  
R. Riglian  
R. Jaffe



932690024